

Appl No. 09/652,511
Reply to Office action of 09/28/04
Amendment/Response date: June 15, 2005

REMARKS/ARGUMENTS

The applicant acknowledges with thanks the Final Office Action mailed March 18, 2005 from the Examiner. This Amendment and Response to Office Action is responsive to this Office Action. Accordingly, the applicant has amended the independent claims to more particularly point out and claim the invention.

Claims 36 and 39 were modified in response to the 35 U.S.C 112, second paragraph rejections by the Examiner. Specifically, in claim 36, "the counter" was changed to "the means for counting" and claim 39 is now dependant upon claim 34 instead of claim 27. Claim 45 has been added, the subject matter of claim 45 is not new matter as it is described on page 8, lines 1-6 of the original specification.

I. Rejection under 35 U.S.C. § 102

Claims 27, 32, 34, 38 and 40 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,516,369 to Bredin et al. (hereinafter Bredin).

By way of review, an aspect of the present invention as now recited in independent claims 27, 34 and 40 is directed to a priority based arbitration system and/or method that use a central arbiter and a priority based arbiter. The central arbiter is coupled to a shared resource and has first and second inputs. A first device is coupled to the first input. A second device is coupled to the priority based arbiter, which intercepts access requests from the second device. The output of the priority based arbiter is coupled to the second input of the central arbiter. In addition, a signal from the first device is provided to the priority based arbiter that is indicative of the priority of the first device. The priority based arbiter delays an access request from the second device to the central arbiter based on the priority of the signal from the first device.

By contrast, Bredin teaches a 2-level mechanism for handling requests from a plurality of devices. Bredin uses a token arbitration followed by a weighted arbiter and aligner to determining which device has current access to the shared resource. Unlike as recited in claims 27, 34 and 40, which recite the request signal from the first device is received by the central arbiter and the request signal from the second device is intercepted and delayed depending upon the priority of the first device, the token arbitrator of Bredin receives all of the request signals and a token vector, and uses a round robin approach to fairly determine the status of each devices

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input request to the weighted arbiter. The weighted arbiter and aligner use the token arbiter and token status outputs to fairly determine which device will be granted access to the shared resource.

Thus Bredin does not disclose a system where a first device is coupled to a central arbiter, and a second device is coupled to a priority based arbiter which intercepts request signals from the second device and delays them from reaching the central arbiter. The amount of delay is based on the priority level of the first device, and the priority based arbiter receives a signal from the first device indicative of the priority level.

Claims 32 and 38 are directly dependent from claims 27 and 34 respectively, and therefore contain each and every element of these claims. Thus, for the reasons already set forth for claims 27 and 34, claims 32 and 38 are also not anticipated by Bredin. Furthermore, Bredin does not disclose the priority based arbiter is responsive to the signal from the first device to control the frequency of access requests from the second device forwarded to the second input of the central arbiter based on the signal from the first device indicative of the priority for the first device as recited in new claim 45.

II. Rejections under 35 U.S.C. § 103

Claims 28-31, 35-37, 41 and 42 were rejected under 35 U.S.C. § 103 based on the combination of Bredin and U.S. Patent No. 6,118,877 to Kalkunte et al. (*hereinafter* Kalkunte).

The aforementioned deficiencies in Bredin are not remedied by any teaching of Kalkunte. The examiner relies on Kalkunte to teach a value is input into a counter based on a signal indicative of the priority status of a first device, which does not remedy the aforementioned deficiencies in Bredin. Therefore, neither Bredin nor Kalkunte, alone or in combination teach, suggest or motivate the present invention.

Furthermore, claims 28-31 and 45 are directly dependent from claim 27 and therefore contain each and every element of claim 27. Similarly, claims 35-37 are directly dependent from claim 34 and contain each and every element of claim 34. Claims 41-45 are directly dependent from claim 40 and therefore contain each and every element of claim 40. Therefore, for the reasons already set forth for claims 27, 34 and 40, claims 28-31, 35-37 and 41-45 are allowable over the cited prior art.

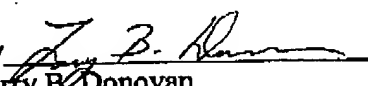
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III. Conclusion

For the reasons set forth above, the claims of the present invention are patentable over the cited prior art. If there are any fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0902, referencing our Docket No. 72255/02659.

Respectfully submitted,

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